MEMO

TO: Michael Diffenderffer, Diff Enterprises LLC

FROM: Corey Mack, PE

DATE: July 30, 2020

SUBJECT: Parking Demand Estimate – 15 Pleasant Valley Road, Underhill VT

RSG has been asked to review the parking requirements for the proposed development at 15 Pleasant Valley Road in Underhill Center, VT. The proposed development consists of converting an existing structure into a mixed-use building, consisting of:

- Three residential dwelling units,
- 1500 square feet of office, and
- 1500 square feet of restaurant / café space (60 seats, 5 employees).

The town of Underhill Land Use Development Regulations, Table 3.1 indicate the following parking requirement:

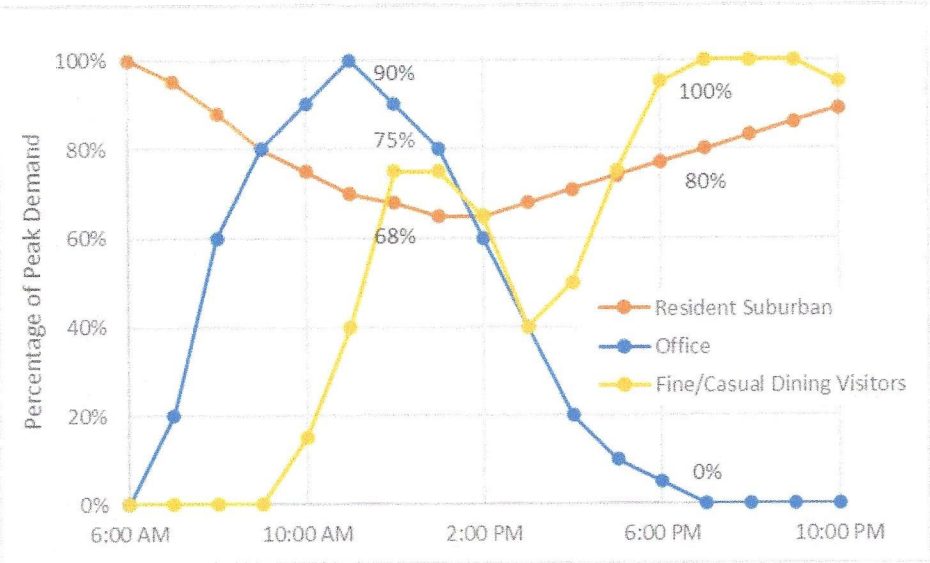
TABLE 1: UNDERHILL PARKING REQUIREMENT FOR THE PROPOSED DEVELOPMENT

LAND USE	UNIT	PARKING CALC.	TOTAL PARKING REQ.
Residential	3 units	3 spaces per 2 units	5 spaces
Office	1500 SF	1 per 300 SF	5 spaces
Restaurant (café)	60 seats; 5 employees	1 per 5 seats plus 1 per employee	12 spaces plus 5 spaces
			27 parking spaces

RSG reviewed the shared parking methodology developed by the Urban Lands Institute (ULI). In general, residential, office, and café / restaurant land uses are considered complimentary. This means the peak hour of parking demand for each land use is different, and therefore the land uses can share parking.

As shown in the following figure, the peak hour for office parking demand is late morning, around 10 AM; restaurant demand peaks in the early evening around 6 PM; and residential demand peaks overnight, from 10 PM to 6 AM.

FIGURE 1: PERCENTAGE OF PEAK PARKING DEMAND BY LAND USE, FROM ULI'S SHARED PARKING, 3RD EDITION



The data supporting the above figure was collected and analyzed by the ULI, the International Council of Shopping Centers, and the National Parking Association in the 3rd edition of Shared Parking. The data is representative of large-scale developments and generalized land uses. However, the parking demand relationship documented in the above figure demonstrates the offset demand and potential for shared parking.

The proposed development is likely to benefit from the offset demand peaks illustrated in Figure 1. If we look at two peak periods, 12 PM and 7 PM, and apply to the demand percentage at each time period to the zoning requirement, we see the actual estimated parking demand may be reduced as shown in the following Table.

TABLE 2: TIME OF DAY DEMAND APPLIED TO ZONING REQUIREMENT

		12 PM		7 PM	
LAND USE	**ZONING REQ**	**DEMAND**	**REDUCED REQ**	**DEMAND**	**REDUCED REQ**
Residential	5	68%	4	80%	4
Office	5	90%	5	0%	0
Restaurant (café)	17	75%	13	100%	17
	27		22		21

In general, we support constructing parking lots that are appropriately sized for the development. However, we recognize that if demand exceeds parking supply, parking behavior may deteriorate. We believe 22 parking spaces would generally meet the

demand of the proposed development. However, we recommend the following parking management practices are undertaken to ensure that a contingency plan exists should actual demand regularly exceed the reduced parking demand calculated in Table 2:

- Assign / reserve up to three spaces to the residential apartments.
- Identify and coordinate use of a nearby off-site parking location:
    - Encourage office and restaurant workers to park at the off-site location during known peak demand days
    - Restaurant / café should manage sandwich board style or other wayfinding to direct new guest arrivals to the overflow lot, to be deployed when the lot nears capacity
- Identify future on-site or nearby parking locations to be developed if parking supply is identified as a continuing issue.

End of memo.